

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC13-15,

ARCELORMITTAL STEEL USA INC.
INDIANA HARBOR EAST

is authorized to discharge from an integrated iron/steel manufacturing facility that is located at 3210 Watling Street, East Chicago, Indiana, to receiving waters named the Indiana Harbor, the Indiana Harbor Ship Canal, and an unnamed tributary to the Grand Calumet River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

Effective Date:_____

Expiration Date:_____

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Signed on _____ for the Indiana Department of
Environmental Management

Bruno Pigott
Assistant Commissioner
Office of Water Quality

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 003 and Outfall 013. The discharge from Outfall 003 is limited to emergency overflows from the process wastewater treatment and recycle system tributary to Outfall 014. The discharge from Outfall 013 is limited to emergency overflow from the Terminal Treatment Plant – West, which is part of the Plant Recycle System tributary to Outfall 014. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal (Outfall 003) and the Indiana Harbor Turning Basin (Outfall 013). Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1, 3, 4, 7] (Outfall 003 and Outfall 013)

Table 1								
<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	----	----	----	[2]	24 Hour Total
TSS	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Oil & Grease	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Lead[5]	Report	Report	lbs/day	Report	Report	ug/l	[2]	Grab
Zinc[5]	Report	Report	lbs/day	Report	Report	ug/l	[2]	Grab
Naphthalene	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Tetrachloroethylene	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Phenols(4AAP)	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab
Cyanide, Free[6]	Report	Report	lbs/day	Report	Report	mg/l	[2]	Grab

Table 2					
<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>		<u>Frequency</u>	<u>Type</u>
pH	6.0	9.0	s.u.	[2]	Grab

- Discharge from any of these outfalls are bypasses and are prohibited except in accordance with Part II.B.2. of this permit.
- Discharge from Outfalls 003 and 013 shall be monitored by grab samples collected every 4 hours when an emergency overflow occurs. When monitoring

is required, the permittee shall monitor and report the discharge from Outfalls 003 and 013 on a daily basis.

- [3] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [4] Any discharge from this location shall be reported according to Part II.C.3.a. and shall not be reported in the Monthly DMRs.
- [5] The permittee shall measure and report the identified metals as total recoverable metals
- [6] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Free Cyanide	4500-CN-G	5 ug/l	16 ug/l
Free Cyanide	1677	0.5 ug/l	1.6 ug/l

- [7] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.

2. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 008. The discharge is limited to emergency overflows of non-contact cooling water, boiler blow down, and zeolite backwash from the No. 2 AC power station through Outfall 008 to the Indiana Harbor Ship Canal. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,4,5]
(Outfall 008)

			Table 1					
<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	----	----	----	[3]	24 Hour Total[2]
Oil & Grease	Report	Report	lbs/day	Report	Report	mg/l	[3]	Grab
Ammonia (as N)	Report	Report	lbs/day	Report	Report	mg/l	[3]	Grab
Lead[7]	Report	Report	lbs/day	Report	Report	ug/l	[3]	Grab
Zinc[7]	Report	Report	lbs/day	Report	Report	ug/l	[3]	Grab
Free Cyanide[8]	Report	Report	lbs/day	Report	Report	mg/l	[3]	Grab
Phenols (4AAP)	Report	Report	lbs/day	Report	Report	mg/l	[3]	Grab
Temperature[6]								
Effluent	----	----	----	Report	Report	°F	[3]	Grab
Intake	----	----	----	Report	Report	°F	[3]	Grab
Thermal								
Discharge[6]	Report	Report	MBtu/hr	----	----	----	[3]	Report
TRC	Report	Report	lbs/day	Report	Report	mg/l	[3]	Grab

			Table 2		
<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>	
	<u>Daily Minimum</u>	<u>Daily Maximum</u>		<u>Frequency</u>	<u>Type</u>
pH	6.0	9.0	s.u.	[3]	Grab

- [1] There shall be no discharge of process wastewaters except boiler blow down and zeolite backwash from the No. 2 AC power station from Outfall 008.
- [2] The 24 hour total average discharge flow from Outfall 008 shall be estimated based upon an average of not less than two flow measurements obtained not less than 6 hours apart.
- [3] Discharge from Outfall 008 shall be monitored when an emergency overflow occurs. When monitoring is required, the permittee shall monitor and report the discharge from Outfall 008 on a daily basis.

- [4] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [5] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.
- [6] See Part III.A. of the permit for Thermal Effluent Requirements.
- [7] The permittee shall measure and report the identified metals as total recoverable metals.
- [8] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Free Cyanide	4500-CN-G	5 ug/l	16 ug/l
Free Cyanide	1677	0.5 ug/l	1.6 ug/l

3. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 011. The discharge is limited to non-contact cooling water from Blast Furnaces 5 and 6, the No. 2 AC Power Station, and the Sinter plant; boiler blowdown from the No. 2 AC Power Station and zeolite rinse water; and some storm water runoff through Outfall 011 to the Indiana Harbor Turning Basin. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,3,4,8]
(Outfall 011)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Monthly</u> <u>Average</u>	<u>Daily</u> <u>Maximum</u>		<u>Monthly</u> <u>Average</u>	<u>Daily</u> <u>Maximum</u>			
Flow[14]	Report	Report	MGD	----	----	----	1 X Day	24 Hour Total [2]
Oil & Grease[5]	----	Report	lbs/day	----	Report	mg/l	1 X Week	Grab
Ammonia (as N)	----	Report	lbs/day	----	Report	mg/l	1 X Month	24 Hr. Comp.
Lead[9]	----	Report	lbs/day	----	Report	ug/l	1 X Month	24 Hr. Comp.
Zinc[9]	----	Report	lbs/day	----	Report	ug/l	1 X Month	24 Hr. Comp.
Phenols (4AAP)	----	Report	lbs/day	----	Report	mg/l	1 X Month	Grab
Mercury[9,10,11]								
Interim	Report	Report	lbs/day	----	Report	ng/l	6 X Year	Grab
Final	0.00092	0.0023	lbs/day	1.3	3.2	ng/l	6 X Year	Grab
Temperature[6]								
Effluent	----	----	----	Report	Report	°F	2 X Week	Grab
Intake	----	----	----	Report	Report	°F	2 X Week	Grab
Thermal Discharge[6]	Report	Report	MBtu/hr	----	----	----	2 X Week	Report
TRC[7,13]	8.5	19[12]	lbs/day	12	27	ug/l	5 X Week	Grab

<u>Parameter</u>	<u>Table 2</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Daily</u> <u>Minimum</u>	<u>Daily</u> <u>Maximum</u>			
pH	6.0	9.0	s.u.	1 X Week	Grab

- [1] There shall be no discharge of process wastewaters except boiler blow down and zeolite backwash from the No. 2 AC power station from Outfall 011.
- [2] The 24 hour total average discharge flow from Outfall 011 shall be estimated based upon an average of not less than two flow measurements obtained not less than 6 hours apart.

- [3] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [4] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.
- [5] See Part I.G. of the permit for Visible Oil Monitoring Requirements.
- [6] See Part III.A. of the permit for Thermal Effluent Requirements.
- [7] See Part I.P. of the permit for Zebra and Quagga Mussel Control Requirements.
- [8] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 011, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [9] The permittee shall measure and report the identified metals as total recoverable metals.
- [10] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E. If EPA Test Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as possible after approval by EPA but no later than the second monitoring event after the revision.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

<u>Parameter</u>	<u>EPA Method</u>	<u>LOD</u>	<u>LOQ</u>
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l

- [11] The permittee has up to a fifty-four (54) month schedule of compliance as outlined in Part I.N. of the permit in which to meet the final effluent limitations for Mercury. Interim monitoring requirements shall apply until the final limits take effect.

- [12] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 42.4 lbs/day.
- [13] See Part I.M. of the permit for the Pollutant Minimization Program requirements.
- [14] ArcelorMittal shall install the equipment necessary to accurately measure the discharge flow from Outfall 011 and to facilitate taking samples that are representative of the discharge within one year after the effective date of this permit. During the period of time before the necessary equipment is installed, ArcelorMittal may estimate the 24 Hour total flow volume from Outfall 011.

4. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 014. The discharge is limited to the blowdown from the Main Plant Recycle System. The system includes process and cooling water from hot forming operations (80" hot strip mill); pickling operations (Nos. 4 and 5 pickle lines, continuous anneal line); cold rolling mills (56" and 80" tandem mills; Nos. 27, 28, and 29 temper mills); alkaline cleaning lines; hot coating lines (No. 5 hot dip galvanizing line); the No. 2 Steel Plant (i.e. BOF); Nos. 5 and 6 blast furnaces; the No. 2 continuous caster; treated sanitary wastewaters (Nos. 1, 2, and 3 sewage treatment plants); and storm water runoff. ArcelorMittal Steel operates three terminal treatment plants (North, East, and West) as part of the Main Plant Recycle System. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,3,4,5,8,14]
(Outfall 014)

			Table 1					
<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	----	----	----	1 X Day	24 Hr. Total
TSS[14]	6620	17092	lbs/day	Report	Report	mg/l	3 X Week	24 Hr. Comp.
Oil & Grease[14,17]	1553	4568	lbs/day	10	15	mg/l	3 X Week	2 Grabs/24 Hrs.[2]
Ammonia (as N)[14]	Report	Report	lbs/day	Report	Report	mg/l	3 X Week	24 Hr. Comp.
T. Cyanide[11,14]	7.38	17.14	lbs/day	Report	Report	mg/l	3 X Week	Grab
Free Cyanide[11]	Report	Report	lbs/day	Report	Report	mg/l	3 X Week	Grab
Phenols (4AAP)[14]	Report	Report	lbs/day	Report	Report	mg/l	3 X Week	Grab
Total Lead[9,14]	5.9	12	lbs/day	61	120	ug/l	3 X Week	24 Hr. Comp.
Total Zinc[9,14]	14.91	35	lbs/day	Report	Report	ug/l	3 X Week	24 Hr. Comp.
Naphthalene	----	1.80	lbs/day	----	Report	mg/l	3 X Month	24 Hr. Comp.
Tetrachloroethylene	----	2.69	lbs/day	----	Report	mg/l	3 X Month	Grab
Mercury[9,10,13]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	6 X Year	Grab
Final	0.00012	0.00031	lbs/day	1.3	3.2	ng/l	6 X Year	Grab
TRC[7,16]	1.2	2.9[12]	lbs/day	13	30	ug/l	5 X Week	Grab
Temperature[6]								
Effluent	----	----	----	Report	Report	°F	2 X Week	Grab
Intake	----	----	----	Report	Report	°F	2 X Week	Grab
Thermal								
Discharge[6]	Report	Report	MBtu/hr	----	----	----	2 X Week	Report
Biomonitoring[15]								

			Table 2		
<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	2 X Week	Grab

- [1] Except as described in Part I.A.1. of this permit, the discharge of process wastewaters from these operations through any other outfall or non-point source is prohibited.
- [2] The 24 hour Oil & Grease values shall be based on an average of not less than two grab samples obtained not less than 6 hours apart.
- [3] The permittee shall not use cyanide plating solutions in any metal finishing operations, unless expressly authorized by a modification of this permit.
- [4] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [5] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.
- [6] See Part III.A. of the permit for Thermal Effluent Requirements.
- [7] See Part I.P. of the permit for Zebra and Quagga Mussel Control Requirements.
- [8] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 014, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [9] The permittee shall measure and report the identified metals as total recoverable metals.
- [10] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E. If EPA Test Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as possible after approval by EPA but no later than the second monitoring event after the revision.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

<u>Parameter</u>	<u>EPA Method</u>	<u>LOD</u>	<u>LOQ</u>
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l

- [11] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Free Cyanide	4500-CN-G	5 ug/l	16 ug/l
Free Cyanide	1677	0.5 ug/l	1.6 ug/l

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Total Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

- [12] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 5.75 lbs/day.
- [13] The permittee has up to a fifty-four (54) month schedule of compliance as outlined in Part I.N. of the permit in which to meet the final effluent limitations for Mercury. Interim monitoring requirements shall apply until the final limits take effect.
- [14] Sampling should occur on the same days during the week for Internal Outfall 613 and Outfall 014.
- [15] See Part I.D. of the permit for Biomonitoring requirements.
- [16] See Part I.M. of the permit for the Pollutant Minimization Program requirements.
- [17] See Part I.G. of the permit for Visible Oil Monitoring requirements.

5. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 613. The discharge is limited to the blowdown from the Nos. 5 and 6 blast furnace recycle system. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin via Outfall 014. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,2]
(Outfall 613)

			Table 1					
Quantity or Loading			Quality or Concentration				Monitoring	Requirements
Monthly			Monthly				Measurement	Sample
<u>Parameter</u>	<u>Average</u>	<u>Daily</u>	<u>Units</u>	<u>Average</u>	<u>Daily</u>	<u>Units</u>	<u>Frequency</u>	<u>Type</u>
Flow	Report	Report	MGD	----	----	----	2 X Week	24 Hour Total
TSS[4]	Report	Report	lbs/day	Report	Report	mg/l	1 X Month	24 Hr. Comp.
Ammonia (as N)[4]	100	300	lbs/day	Report	Report	mg/l	2 X Week	24 Hr. Comp.
T. Cyanide[3,4]	8.73	17.41	lbs/day	Report	Report	mg/l	2 X Week	Grab
Phenols (4AAP)[4]	0.32	0.64	lbs/day	Report	Report	mg/l	2 X Week	Grab
Total Lead[4]	Report	Report	lbs/day	Report	Report	ug/l	1 X Month	24 Hr. Comp.
Total Zinc[4]	Report	Report	lbs/day	Report	Report	ug/l	1 X Month	24 Hr. Comp.

- [1] The discharge of Nos. 5 and 6 blast furnace process wastewaters through any other outfall or non-point source is prohibited.
- [2] Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entering the plant recycle system or commingling with any other wastewaters.
- [3] Sample preservation procedures and maximum allowable holding times for cyanide, total or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Total Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

- [4] Sampling should occur on the same days during the week for Internal Outfall 613 and Outfall 014.

6. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 018. The discharge is limited to non-contact cooling water; treated effluents from the No. 4 Steel Plant (BOF), vacuum degasser (RHOB), and No. 1 continuous caster (internal Outfall 618); treated effluents from the No. 7 blast furnace gas scrubber system, (internal Outfall 518); cooling tower blowdown and low-volume wastes from the No. 5 boiler house, North Lake Energy/No. 7 Turbine and CokeEnergy co-generating facility; storm water runoff; and storm water runoff from the Indiana Harbor Coke Company. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [3,4,6,11]
(Outfall 018)

Quantity or Loading			Table 1 Quality or Concentration			Monitoring		Requirements
<u>Parameter</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>	<u>Units</u>	<u>Frequency</u>	
Flow[17]	Report	Report	MGD	----	----	----	1 X Day	24 Hr. Total
Oil & Grease[1,12]	----	----	----	----	Report	mg/l	1 X Week	Grab
Free Cyanide[16]	Report	Report	lbs/day	Report	Report	mg/l	2 X Week	Grab
Ammonia (as N)[12]	Report	Report	lbs/day	Report	Report	mg/l	2 X Week	24 Hr. Comp.
Phenols (4AAP)[12]	Report	Report	lbs/day	Report	Report	mg/l	2 X Week	Grab
Lead[7,12,9]								
Interim	Report	Report	lbs/day	Report	Report	ug/l	2 X Week	24 Hr. Comp.
Final	5.0	10	lbs/day	38	77	ug/l	2 X Week	24 Hr. Comp.
Zinc [7,12,9]								
Interim	Report	Report	lbs/day	Report	Report	ug/l	2 X Week	24 Hr. Comp.
Final	24	48	lbs/day	180	360	ug/l	2 X Week	24 Hr. Comp.
Mercury[7,8,9]								
Interim	Report	Report	lbs/day	Report	Report	ng/l	6 X Year	Grab
Final	0.00017	0.00042	lbs/day	1.3	3.2	ng/l	6 X Year	Grab
TRC[5,12,15]	1.7	4.0[10]	lbs/day	13	30	ug/l	5 X Week	Grab
Temperature[2]								
Effluent	----	----	----	Report	Report	°F	2 X Week	Grab
Intake	----	----	----	Report	Report	°F	2 X Week	Grab
Thermal								
Discharge[2]	Report	Report	MBtu/hr	----	----	----	2 X Week	Report
Selenium[7,12]	Report	Report	lbs/day	Report	Report	mg/l	2 X Month	24 Hr. Composite
Biomonitoring[13]								

Table 2 Quality or Concentration			Monitoring		Requirements
<u>Parameter</u>	<u>Daily Minimum</u>	<u>Daily Maximum</u>	<u>Units</u>	<u>Frequency</u>	
pH	6.0	9.0	s.u.	1 X Day	Continuous[14]

- [1] See Part I.G. of the permit for Visible Oil Monitoring requirements.
- [2] See Part III.A. of the permit for Thermal Effluent Requirements.
- [3] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [4] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.
- [5] See Part I.P. for Zebra and Quagga Mussel Control Requirements. In addition, the monitoring requirements for chlorine shall continue during periods that chlorine is in the discharge from Outfall 518.
- [6] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 018, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [7] The permittee shall measure and report the identified metals as total recoverable metals.
- [8] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E. If EPA Test Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method as soon as possible after approval by EPA but no later than the second monitoring event after the revision.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

<u>Parameter</u>	<u>EPA Method</u>	<u>LOD</u>	<u>LOQ</u>
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l

- [9] The permittee has up to a fifty-four (54) month schedule of compliance as outlined in Part I.N. of the permit in which to meet the final effluent limitations for Mercury, Lead and Zinc. Interim monitoring requirements shall apply until the final limits take effect.

- [10] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 7.96 lbs/day.
- [11] Low volume waste sources include but are not limited to those found in 40 CFR 423.11 (b). They include wastewaters from ion exchange water treatment, laboratory and sampling streams, boiler blowdown, and floor drains. There shall be no discharge of cooling tower basin cleaning wastes through Outfall 018.
- [12] Sampling should occur on the same days during the week for Internal Outfall 518, Internal Outfall 618, and Outfall 018.
- [13] See Part I.D. of the permit for Biomonitoring requirements.
- [14] In accordance with 40 CFR 401.17, where a permittee continuously measures the pH of wastewater, the permittee shall maintain the pH of such wastewater within the range set forth in the applicable effluent limitations guidelines, except excursions from the range are permitted subject to the following limitations; 1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month, and 2) no individual excursion from the range of pH values shall exceed 60 minutes in duration or 0.5 s.u. in magnitude. An excursion is an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines.
- [15] See Part I.M. of the permit for the Pollutant Minimization Program requirements.
- [16] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Free Cyanide	4500-CN-G	5 ug/l	16 ug/l
Free Cyanide	1677	0.5 ug/l	1.6 ug/l

- [17] ArcelorMittal shall install the equipment necessary to accurately measure the discharge flow from Outfall 018 and to facilitate taking samples that are representative of the discharge within one year after the effective date of this permit. During the period of time before the necessary equipment is installed, ArcelorMittal may estimate the 24 Hour total flow volume from Outfall 018.

7. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 518. The discharge is limited to treated wastewater from the No. 7 Blast Furnace gas scrubber system. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with any other wastewaters. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [2]
(Outfall 518)

Quantity or Loading			Quality or Concentration			Monitoring	Requirements
<u>Parameter</u>	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>Daily</u>	<u>Frequency</u>	<u>Sample Type</u>
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>		
Flow	Report	Report	MGD	----	----	----	Continuous
TSS	91.24	243.71	lbs/day	Report	Report	mg/l	2 X Week
Oil & Grease	----	60.82	lbs/day	----	Report	mg/l	2 X Week
Ammonia (as N)	60.82	182.47	lbs/day	Report	Report	mg/l	2 X Week
T. Cyanide[1]	6.08	12.16	lbs/day	Report	Report	mg/l	2 X Week
Phenols (4AAP)	0.61	1.22	lbs/day	Report	Report	mg/l	2 X Week
Total Lead[3]	1.32	2.28	lbs/day	Report	Report	ug/l	2 X Week
Total Zinc[3]	2.73	8.21	lbs/day	Report	Report	ug/l	2 X Week
TRC	----	3.04	lbs/day	----	Report	mg/l	2 X Week
Selenium[3]	Report	Report	lbs/day	Report	Report	mg/l	1 X Week

- [1] Sample preservation procedures and maximum allowable holding times for cyanide, total or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Total Cyanide	335.2 or 4500 CN-E	5 ug/l	16 ug/l

- [2] Sampling should occur on the same days during the week for Internal Outfall 518, Internal Outfall 618, and Outfall 018.
- [3] The permittee shall measure and report the identified metals as total recoverable metals.

8. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 618. The discharge is limited to treated wastewater from the No. 4 BOF, the vacuum degasser (RHOB), and the No. 1 continuous caster process water systems. Treated wastewaters are limited and monitored prior to mixing with non-contact cooling water and discharged to the Indiana Harbor Turning Basin via Outfall 018. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Turning Basin via Outfall 018. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,3,4]
(Outfall 618)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1 Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Measurement Frequency</u>	<u>Requirements Sample Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	----	----	----	2 X Week	24 Hour Total
TSS	360	720	lbs/day	Report	Report	mg/l	2 X Week	24 Hr. Comp.
Oil & Grease	102	216	lbs/day	Report	Report	mg/l	2 X Week	2 Grabs/24 Hr.[2]
Total Lead	2.16	6.48	lbs/day	Report	Report	ug/l	2 X Week	24 Hr. Comp.
Total Zinc	3.50	10.50	lbs/day	Report	Report	ug/l	2 X Week	24 Hr. Comp.

- [1] Sampling should occur on the same days during the week for Internal Outfall 518, Internal Outfall 618, and Outfall 018.
- [2] The 24 hour Oil & Grease values shall be based on an average of not less than two grab samples obtained not less than 6 hours apart.
- [3] The discharge of process wastewaters from the No. 4 BOF, the vacuum degasser, or No. 1 continuous caster through any other outfall or non-point source is prohibited.
- [4] Samples taken in compliance with the above monitoring requirements shall be taken at a point representative of the discharge from the No. 4 BOF treatment facility prior to mixing with any other process water or cooling waters.

9. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 019. The discharge is limited to non-contact cooling water and storm water runoff from ArcelorMittal Steel's research facility. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the unnamed tributary to the Grand Calumet River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1,2,3,4]
(Outfall 019)

<u>Parameter</u>	Quantity or Loading		<u>Units</u>	Table 1 Quality or Concentration		<u>Units</u>	Monitoring Measurement <u>Frequency</u>	Requirements Sample <u>Type</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>			
Flow	Report	Report	MGD	----	----	----	1 X Month	24 Hour Total
TSS	----	----	----	----	Report	mg/l	1 X Month	Grab
Oil & Grease TRC[5]	----	----	----	----	Report	mg/l	1 X Month	Grab
Interim	Report	Report	lbs/day	Report	Report	ug/l	1 X Month	Grab
Final [7]	0.0083	0.017 [6]	lbs/day	10	20	ug/l	1 X Month	Grab

<u>Parameter</u>	Table 2 Quality or Concentration		<u>Units</u>	Monitoring Measurement <u>Frequency</u>	Requirements Sample <u>Type</u>
	<u>Daily Minimum</u>	<u>Daily Maximum</u>			
pH	6.0	9.0	s.u.	1 X Month	Grab

- [1] See Part I.B. of the permit for the Narrative Water Quality Standards.
- [2] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 019, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.
- [3] The permittee shall not discharge process wastewaters through Outfall 019.
- [4] See Part I.E. of the permit for Storm Water Monitoring Requirements and Non Numeric Conditions. See Part I.F. of the permit for Storm Water Pollution Prevention Plan requirements.
- [5] See Part I.M. of the permit for the Pollutant Minimization Program requirements.

- [6] Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 0.05 lbs/day.
- [7] The final limits for Total Residual Chlorine (TRC) shall become effective within twelve (12) months from the effective date of the permit. During the interim period reporting only shall be required for TRC.

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:
 - a. that will settle to form putrescent or otherwise objectionable deposits;
 - b. that are in amounts sufficient to be unsightly or deleterious;
 - c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
 - d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;
 - e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.
2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge.

2. Discharge Monitoring Reports

- a. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0).

- b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall use an arithmetic mean. When a daily discharge value is below the LOQ, a value of zero (0) shall be used for that value in the calculation to determine the monthly average unless otherwise specified or approved by the Commissioner.
- c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.
- d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.
- e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.
- f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month which shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective.

The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

3. Definitions

- a. Monthly Average
 - (1) Mass Basis - The “monthly average” discharge means the total mass discharge during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily

samples is required by this permit, the monthly average discharge shall be determined by the summation of the measured daily mass discharges divided by the number of days during the calendar month when the measurements were made.

- (2) Concentration Basis - The “monthly average” concentration means the arithmetic average of all daily determinations of concentration made during a calendar month. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. “Daily Discharge”

- (1) Mass Basis – The “daily discharge” means the total mass discharge by weight during any calendar day.
- (2) Concentration Basis – The “daily discharge” means the average concentration over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling.

c. “Daily Maximum”

- (1) Mass Basis – The “daily maximum” means the maximum daily discharge mass value for any calendar day.
- (2) Concentration Basis – The “daily maximum” means the maximum daily discharge value for any calendar day.
- (3) Temperature Basis – The “daily maximum” means the highest temperature value measured for any calendar day.

d. A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately either equally spaced time intervals or time intervals between samples proportional to stream flow for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:

- (1) recording the discharge flow rate at the time each individual sample is taken,

- (2) adding together the discharge flow rates recorded from each individual's sampling time to formulate the "total flow" value,
 - (3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,
 - (4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.
- e. Concentration -The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).
- f. The "Regional Administrator" is defined as the Region V Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.
- g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.
- h. "Limit of Detection" or "LOD" means a measurement of the concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.
- i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.
- j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and

reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

4. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

- a. Standard Methods for the Examination of Water and Wastewater 18th, 19th, or 20th Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.
- b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis 1972 American Society for Testing and Materials, Philadelphia, PA 19103.
- c. Methods for Chemical Analysis of Water and Wastes June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The person(s) who performed the sampling or measurements;
- c. The dates the analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of all required analyses and measurements.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

- a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or
- b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended 40 CFR 136.3 (Tables IA and II) by adding testing method for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part I.D.1. describes the testing procedures, Part I.D.2. describes the Toxicity Reduction Evaluation (TRE) which is only required if the effluent demonstrated toxicity, as described in Part I.D.1.f.

1. Whole Effluent Toxicity Tests

Within 90 days of the effective date of the permit, the permittee shall initiate the series of bioassay tests described below to monitor the toxicity of the discharge from Outfalls 014 and 018. If toxicity is demonstrated as defined under Part I.D.1.f. below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

a. Bioassay Test Procedures and Data Analysis

- (1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0; and Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method, (1000.0) EPA 821-R-02-013, October 2002, or most recent update.
- (2) Any circumstances not covered by the above methods, or that required deviation from the specified methods shall first be approved by the IDEM's NPDES Permits Branch.
- (3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA-821-R-02-013), Fourth Edition, October 2002, or most recent update.

b. Types of Bioassay Tests

- (1) The permittee shall conduct 7-day Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test and a 7-day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test on samples of final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.

- (2) If, in any control, more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the Ceriodaphnia test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods; and in the fathead minnow test if the mean dry weight of 7-day old surviving fish in the control group is less than 0.25 mg, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

- (1) Samples taken for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.
- (2) Chemical analysis must accompany each effluent sample taken for bioassay test, especially the sample taken for the repeat or confirmation test as outlined in Part I.D.1.f.3. below. The analysis detailed under Part I.A.4. should be conducted for the effluent sample from Outfall 014 and the analysis detailed under Part I.A.6. should be conducted for the effluent sample from Outfall 018. Chemical analysis must comply with approved EPA test methods.

d. Testing Frequency and Duration

The chronic toxicity test specified in Part I.D.1.b. above shall be conducted monthly for a period of three consecutive months. If toxicity is demonstrated, as defined in Part I.D.1.f, the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Part I.D.2. (Toxicity Reduction Evaluation (TRE) Schedule of Compliance). In the absence of toxicity with either species in the monthly testing for three (3) months in the current tests, sensitive species will be selected based on frequency and

failure of whole effluent toxicity tests with one or the other species in the immediate past.

If no toxicity is demonstrated, as defined in Part I.D.1.f. below the testing frequency shall be reduced to once every **quarter** for the duration of the permit. After three tests have been completed, that indicate no toxicity, the permittee may reduce the number of species tested to only include the most sensitive to the toxicity in the effluent.

e. Reporting

- (1) Results shall be reported according to EPA 821-R-02-013, October 2002, Section 10 (Report Preparation). Two copies of the completed report for each test shall be submitted to the Compliance Data Section, Office of Water Quality of the IDEM no later than sixty days after completion of the test.
- (2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the respective test species *Ceriodaphnia dubia* and *Pimephales promelas*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.
- (3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

- (1) Acute toxicity will be demonstrated if the effluent is observed to have exceeded 1.0 TU_a (acute toxic units) based on 100% effluent for the test organism in 48 and 96 hours for *Ceriodaphnia dubia* or *Pimephales promelas*, respectively.
- (2) Chronic toxicity will be demonstrated if the effluent is observed to have exceeded the levels specified below for *Ceriodaphnia dubia* or *Pimephales promelas*:

<u>Outfall</u>	<u>Chronic Toxicity Level</u>	<u>Units</u>
014	10	TUc
018	7.7	TUc

- (3) If toxicity is found in any of the tests as specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks of the completion of the failed test to confirm results. During the sampling for any confirmation test the permittee shall also collect and preserve sufficient effluent samples for use in any Toxicity Identification Evaluation (TIE) and/or Toxicity Reduction Evaluation (TRE), if necessary. If any two (2) consecutive tests, including any and all confirmation tests, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE/TIE are being conducted.

g. Definitions

- (1) TU_c is defined as $100/NOEC$ or $100/IC_{25}$, where the $NOEC$ or IC_{25} are expressed as a percent effluent in the test medium.
- (2) TU_a is defined as $100/LC_{50}$ where the LC_{50} is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.
- (3) “Inhibition concentration 25” or “ IC_{25} ” means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the IC_{25} is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.
- (4) “No observed effect concentration” or “ $NOEC$ ” is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of

toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance

The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined in Part I.D.1.f. above.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Data Section, Office of Water Quality of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicants and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications list below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characteristics Procedures, Second Edition (EPA/600/6-91/003, February 1991).

Phase II Toxicity Identification Procedures (EPA 600/R-92/080), September 1993.

Phase III Toxicity Confirmation Procedures (EPA 600/R-92/081), September 1993.

(2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I. EPA/600/6-91/005F, May 1992.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), (EPA/600/2-88/070), April 1989.

(4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatments Plants (EPA/833-B-99-022) August 1999.

b. Conduct the Plan

Within 30 days after the submission of the TRE plan to IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Data Section, Office of Water Quality of the IDEM beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Data Section, Office of Water Quality of the IDEM, the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Part I.D.2. above and reduce the toxicity to acceptable levels as soon as possible, but no later than three years after the date of determination of toxicity.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three consecutive monthly tests demonstrate no toxicity, the permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent, (see Part I.D.1.d. above for more specifics on this topic), and conduct chronic tests quarterly for the duration of the permit.

If toxicity is demonstrated, as defined in Part I.D.1.f. above, after the initial three month period, testing must revert to a TRE as described in Part I.D.2. (TRE) above.

E. STORM WATER MONITORING AND NON NUMERIC CONDITIONS

Beginning on the effective date the permittee shall conduct storm water monitoring for the storm water discharge points set out in Part I.E.1. on a semi-annual basis.

1. Storm Water Monitoring:

(a) Storm Water Monitoring Points:

*Outfall 007	Plant 2 (48 inch pipe)	IHSC
SW-01	West of No. 6 dock ore hopper (Plant 2)	IHTB
SW-02	No. 6 dock east of ore unloading hopper (Plant 2)	IHTB
SW-03	No. 5 Dock east of SW-2 (Plant 2)	IHTB
SW-04	East end of dock No. 6 (Plant 2) west of Outfall 018	IHTB
SW-05	NE corner of turning basin	IHTB
SW-06	Adjacent to Plant 2 Blast Furnace wastewater treatment basins	IHTB
SW-07	South side of turning basin	IHTB
SW-08	Plant 2 Indiana Harbor Ship Canal Dock	IHSC
SW-09	Far southwest end of the Plant 2 dock area	IHTB
SW-10	Far south end of Plant 2 dock	IHSC

IHSC = Indiana Harbor Ship Canal

IHTB = Indiana Harbor Turning Basin

(b) Monitoring requirements applicable to all points listed above:

Flow, Oil & Grease, CBOD5, COD, TSS, Total Kjeldahl Nitrogen, Nitrate + Nitrite Nitrogen, Total Phosphorus, pH, Ammonia, Total Chromium, Cyanide (Free), Copper, Iron, Lead, and Zinc.

(c) The permittee shall measure and report all metals as **total recoverable** metal.

(d) Additional monitoring requirements for specific outfalls are:

*Monitoring Point Outfall 007 - Groundwater infiltration into the storm sewer creates a continuous discharge. The permittee shall conduct monthly monitoring of the groundwater infiltration for: Flow, pH, Ammonia, Free Cyanide, and Phenols (4AAP). Results will be reported on the monthly reports for Outfall 007.

(e) For all point source discharges of storm water see Part I.B. of the permit for the Narrative Water Quality Standards.

(f) In the event storm water runoff is not discharged from the same locations monitored for in the storm water application (2F), the permittee shall monitor storm water runoff from a point or points representative of the discrete storm water drainage areas illustrated in the application.

(g) Areas not subject to Storm Water requirements:

Outfall 002: through the use of engineering controls this outfall no longer discharges to a water of the State.

(h) Monitoring Pollutant Reduction Measures:

This permit stipulates a pollutant baseline concentration that shall be used as a means for comparison of future discharge concentrations. Baseline monitoring will be on a semi- annual basis and will provide a basis for the facility to know when additional corrective measures are necessary.

A pollutant baseline concentration will be established by a minimum of five consecutive datasets from each storm water monitoring point in Part I.E.1(a). Each dataset should be used to statistically determine the initial baseline concentration for Lead and Zinc for each storm water monitoring point. New baseline concentrations shall be statistically re-calculated using a five year rolling dataset whenever the annual concentration(s) is less than the existing baseline concentration(s). A new baseline exceeding an existing baseline will default to the existing baseline until the next re-calculation. A sample result exceeding an existing baseline at the time of comparison shall never be included in a baseline recalculation.

Stormwater monitoring data collected during the permit term shall be compared to the baseline concentrations to determine if the control measures being implemented at the site result in an improvement from the baseline established by the permittee. If the sample result exceeds the baseline concentration, the permittee must take corrective actions in Part I.E.7.b. of the permit. Follow-up sampling should occur as soon as possible after implementation of corrective actions.

An exceedance of a baseline concentration is not a permit violation. However, failing to take the corrective actions in Part I.E.7 as a result of a baseline concentration exceedance is a violation of the permit. The permittee shall strive for continuous improvement from the baseline until it has been demonstrated that the permittee has implemented the best management practice to meet the provisions in Part I.E.5. of this permit. This permit also requires an annual review of the selection, design, installation, and implementation of your control measures (See Part I.E.6). The permittee shall retain any and all records related to this documentation

within the SWP3. In addition, this same information must also be submitted to the Industrial NPDES Permit Section on an annual basis.

- (i) Parameters for determining baseline concentrations:

Monitoring Parameters		
Parameter	Outfalls	Monitoring Concentration
Lead	All stormwater locations in I.E.1	Report mg/l
Zinc	All stormwater locations in I.E.1	Report mg/l

2 Control Measures and Effluent Limits

In the technology-based limits included in Parts I.E.3-5., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

3. Control Measures

Select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part I.E.4 to meet the non-numeric effluent limits in Part I.E.5. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. This also includes the BMP requirements for the Coal Processing Area. Any deviation from the manufacturer’s specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as expeditiously as practicable. Regulated stormwater discharges from the facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility.

4. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing stormwater from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from stormwater;

- b. use of control measures in combination is more effective than use of control measures in isolation for minimizing pollutants in stormwater discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- d. minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
- e. flow can be attenuated by use of open vegetated swales and natural depressions;
- f. conservation and/or restoration of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- g. use of treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

5. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion

systems.

Material storage areas: locate indoors, or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and stowing materials in appropriate containers.

As part of the developed good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective

response to such spills if or when they occur. At a minimum, you must implement:

- (1) Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- (2) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- (3) Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or lead must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your storm water pollution prevention team;
- (4) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available;
- (5) Procedures for documenting where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfalls that would be affected by such spills and leaks, and
- (6) A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions to meet this limit,

place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to check out information from both the State and EPA websites. The following two websites are given as information sources:

<http://www.in.gov/idem/4899.htm> and
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Waste, Garbage, and Floatable Debris

Ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

i. Employee Training

Train all employees who work in areas where industrial material or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover the specific control measures used to achieve the effluent limits in this part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit.

j. Non-Stormwater Discharges

You must determine if any non-stormwater discharges not authorized by an NPDES permit exist. Any non-stormwater discharges discovered must either be eliminated or modified into this permit.

The following non-stormwater discharges are authorized and should be documented when they occur in accordance with Part I.F.2.c. of the permit:

- Discharges from fire-fighting activities;
- Fire Hydrant flushings;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);
- Routine external building washdown that does not use detergents;
- Uncontaminated ground water or spring water;

k. Dust Generation and Vehicle Tracking of Industrial Materials

You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

6. Annual Review

At least once every 12 months, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limitations in this permit. You must document the results of your review in a report that shall be retained within the SWP3. You must also submit the report to the Industrial NPDES Permit Section on an annual basis.

7. Corrective Actions – Conditions Requiring Review

- a. If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated:
 - (1) an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at this facility;
 - (2) it is determined that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
 - (3) it is determined in your routine facility inspection, an inspection by EPA or IDEM, comprehensive site evaluation, or the Annual Review required in Part I.E.6 that modifications to the control measures are necessary to meet the effluent limits in this permit or that your control measures are not being properly operated and maintained; or
 - (4) Upon written notice by the Commissioner that the control measures prove to be ineffective in controlling pollutants in storm water discharges exposed to industrial activity.
- b. If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit:
 - (1) sampling results in accordance with Part I.E.1.i. show an exceedance of a baseline concentration; or
 - (2) construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharge.

8. Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Part I.E.7 within thirty (30) days of making such discovery. Subsequently,

within one-hundred and twenty (120) days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency or if no corrective action is needed, the basis for that determination. Specific documentation required within 30 and 120 days is detailed below. If you determine that changes to your control measures are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but schedules considered reasonable for the documenting of your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

9. Corrective Action Report

Within 30 days of a discovery of any condition listed in Part I.E.7, you must document the following information:

- a. Brief description of the condition triggering corrective action;
- b. Date condition identified; and
- c. How deficiency identified.

Within 120 days of discovery of any condition listed in Part I.E.7, you must document the following information:

- a. Summary of corrective action taken or to be taken (or, for triggering events identified in Part I.E.7.a.3., where you determine that corrective action is not necessary, the basis for this determination)
- b. Notice of whether SWP3 modifications are required as a result of this discovery or corrective action;
- c. Date corrective action initiated; and
- d. Date corrective action completed or expected to be completed.

10. Inspections

The inspections in this part must be conducted at this facility.

- a. At a minimum, quarterly inspections of the stormwater management measures and stormwater run-off conveyances. The

routine inspections must be performed by qualified personnel with at least one member of your storm water pollution prevention team. Inspections must be documented and either contained in, or have the on-site record keeping location referenced in, the SWP3.

- b. Routine Facility Inspection Documentation – You must document the findings of each routine facility inspection performed and maintain this documentation with your SWP3 or have the on-site record keeping location referenced in the SWP3. At a minimum, your documentation must include:
- (1) The inspection date and time;
 - (2) The name(s) and signature(s) of the inspectors;
 - (3) Weather information and a description of any discharges occurring at the time of the inspection;
 - (4) Any previously unidentified discharges of pollutants from the site;
 - (5) Any control measures needing maintenance or repairs;
 - (6) Any failed control measures that need replacement;
 - (7) Any incidents of noncompliance observed; and
 - (8) Any additional control measures needed to comply with the permit requirements.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.E.7 of this permit.

- c. Comprehensive Site Compliance Evaluation – Qualified personnel shall conduct a comprehensive site compliance evaluation, at least once per year, to confirm the accuracy of the description of potential pollution sources contained in the plan, determine the effectiveness of the plan, and assess compliance with the permit. Such evaluations shall provide:
- (1) Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings

shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measure, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

As part of the routine inspections, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitator, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Considering monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material loss due to wind or stormwater runoff.

- (2) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with Part I.F.2.b of this permit and pollution prevention measures and controls identified in the plan in accordance with Part I.E.5. of this permit shall be revised as appropriate within the timeframes contained in Part I.E.8 of this permit.
- (3) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water control measures, and actions taken in accordance with the above paragraph must be documented and either contained in, or have on-site record keeping location referenced in, the SWP3 at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in

compliance with the effluent limitations and this permit.
The report shall be signed in accordance with the signatory requirements of Part II.C.6 of this permit.

- (4) Where compliance evaluation schedules overlap the inspections required under part (a) of this section, the compliance evaluation may be conducted in place of one such inspection.

F. STORM WATER POLLUTION PREVENTION PLAN

1. Development of Plan

Within 12 months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWP3) for the permitted facility. The plan shall at a minimum include the following:

- a. Identify potential sources of pollution, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. Storm water associated with industrial activity (defined in 40 CFR 122.26(b)(14)) includes, but is not limited to, the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or materials storage areas at an industrial plant;
- b. Describe practices and measures to be used in reducing the potential for pollutants to be exposed to storm water; and
- c. Assure compliance with the terms and conditions of this permit.

2. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team -The plan shall list, by position title, the member or members of the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan (SWP3) and assisting the facility or plant manager in implementation and maintenance of the control measures, and revision of the plan. The plan shall clearly identify the responsibilities of each storm water pollution prevention team member. Each member of the stormwater pollution prevention

team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWP3.

- b. Description of Potential Pollutant Sources – The plan shall provide a description of areas at the site exposed to industrial activity and have a reasonable potential for storm water to be exposed to pollutants. The plan shall identify all activities and significant materials (defined in 40 CFR 122.26(b)), which may potentially be significant pollutant sources. As a minimum, the plan shall contain the following:

- (1) A soils map indicating the types of soils found on the facility property and showing the boundaries of the facility property.
- (2) A graphical representation, such as an aerial photograph or site layout maps, drawn to an appropriate scale, which contains a legend and compass coordinates, indicating, at a minimum, the following:
 - (A) All on-site storm water drainage and discharge conveyances, which may include pipes, ditches, swales, and erosion channels, related to a storm water discharge.
 - (B) Known adjacent property drainage and discharge conveyances, if directly associated with run-off from the facility.
 - (C) All on-site and known adjacent property water bodies, including wetlands and springs.
 - (D) An outline of the drainage area for each outfall.
 - (E) An outline of the facility property, indicating directional flows, via arrows, of surface drainage patterns.
 - (F) An outline of impervious surfaces, which includes pavement and buildings, and an estimate of the impervious and pervious surface square footage for each drainage area placed in a map legend.
 - (G) On-site injection wells, as applicable.
 - (H) On-site wells used as potable water sources, as

applicable.

- (I) All existing major structural control measures to reduce pollutants in storm water run-off.
- (J) All existing and historical underground or aboveground storage tank locations, as applicable.
- (K) All permanently designated plowed or dumped snow storage locations.
- (L) All loading and unloading areas for solid and liquid bulk materials.
- (M) All existing and historical outdoor storage areas for raw materials, intermediary products, final products, and waste materials. Include materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities.
- (N) All existing or historical outdoor storage areas for fuels, processing equipment, and other containerized materials, for example, in drums and totes.
- (O) Outdoor processing areas.
- (P) Dust or particulate generating process areas.
- (Q) Outdoor assigned waste storage or disposal areas.
- (R) Pesticide or herbicide application areas.
- (S) Vehicular access roads.
- (T) Identify any storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate

matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operation, etc., and could result in a discharge of pollutants.

The mapping of historical locations is only required if the historical locations have a reasonable potential for stormwater exposure to historical pollutants.

- (3) An area site map that indicates:
 - (A) The topographic relief or similar elevations to determine surface drainage patterns;
 - (B) The facility boundaries;
 - (C) All receiving waters; and
 - (D) All known drinking water wells; and

Includes at a minimum, the features in clauses (A), (C), and (D) within a one-fourth (1/4) mile radius beyond the property boundaries of the facility. This map must be to scale and include a legend and compass coordinates.

- (4) A narrative description of areas that generate stormwater discharges exposed to industrial activity including descriptions for any existing or historical areas listed in subdivision 2.b.(2)(J) through (T) of this Part, and any other areas thought to generate storm water discharges exposed to industrial activity. The narrative descriptions for each identified area must include the following:
 - (A) Type and typical quantity of materials present in the area.
 - (B) Methods of storage, including presence of any secondary containment measures.
 - (C) Any remedial actions undertaken in the area to eliminate pollutant sources or exposure of storm water to those sources. If a corrective action plan was developed, the type of remedial action and plan date shall be referenced.

(D) Any significant release or spill history dating back a period of three (3) years from the effective date of this permit, in the identified area, for materials spilled outside of secondary containment structures and impervious surfaces in excess of their reportable quantity, including the following:

- i. The date and type of material released or spilled.
- ii. The estimated volume released or spilled.
- iii. A description of the remedial actions undertaken, including disposal or treatment.

Depending on the adequacy or completeness of the remedial actions, the spill history shall be used to determine additional pollutant sources that may be exposed to storm water. In subsequent permit terms, the history shall date back for a period of five (5) years from the date of the permit renewal application.

(E) Where the chemicals or materials have the potential to be exposed to storm water discharges, the descriptions for each identified area must include a risk identification analysis of chemicals or materials stored or used within the area. The analysis must include the following:

- i. Toxicity data of chemicals or materials used within the area, referencing appropriate material safety data sheet information locations.
- ii. The frequency and typical quantity of listed chemicals or materials to be stored within the area.
- iii. Potential ways in which storm water discharges may be exposed to listed chemicals and materials.
- iv. The likelihood of the listed chemicals and materials to come into contact with water.

- (5) A narrative description of existing and planned management practices and measures to improve the quality of storm water run-off entering a water of the state. Descriptions must be created for existing or historical areas listed in subdivision 2.b.(2)(J) through (T) and any other areas thought to generate storm water discharges exposed to industrial activity. The description must include the following:
 - (A) Any existing or planned structural and nonstructural control practices and measures.
 - (B) Any treatment the storm water receives prior to leaving the facility property or entering a water of the state.
 - (C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.
 - (D) Describe areas that due to topography, activities, or other factors have a high potential for significant soil erosion.
 - (E) Document the location of any storage piles containing salt used for deicing.
 - (F) Information or other documentation required under subsection (d) of this plan.
- (6) The results of stormwater monitoring. The monitoring data must include completed field data sheets, chain-of-custody forms, and laboratory results. If the monitoring data are not placed into the facility's SWP3, the on-site location for storage of the information must be reference in the SWP3.

- c. Non-Stormwater Discharges – You must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include

A written non-storm water assessment, including the following:

- (1) A certification letter stating that storm water

discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-storm water contributions.

- (2) Detergent or solvent-based washing of equipment or vehicles that would allow washwater additives to enter any storm water only drainage system shall not be allowed at this facility unless appropriately permitted under this NPDES permit.
- (3) All interior maintenance area floor drains with the potential for maintenance fluids or other materials to enter storm water only storm sewers must be either sealed, connected to a sanitary sewer with prior authorization, or appropriately permitted under this NPDES permit. The sealing, sanitary sewer connecting, or permitting of drains under this item must be documented in the written non-storm water assessment program.
- (4) The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during the test.

d. General Requirements – The SWP3 must meet the following general requirements:

- (1) The plan shall be certified by a qualified professional. The term qualified professional means an individual who is trained and experienced in water treatment techniques and related fields as may be demonstrated by state registration, professional certification, or completion of course work that enable the individual to make sound, professional judgments regarding storm water control/treatment and monitoring, pollutant fate and transport, and drainage planning.
- (2) The plan shall be retained at the facility and be available for review by a representative of the Commissioner upon request. IDEM may provide access to portions of your SWP3 to the public.
- (3) The plan must be revised and updated as required. A revised and updated version of the plan must be in place

and the storm water control measures described therein must be implemented on or before three hundred sixty-five (365) days from the effective date of this permit. The Commissioner may grant an extension of this time frame based on a request by the person showing reasonable cause.

- (4) If the permittee has other written plans, required under applicable federal or state law, such as operation and maintenance, spill prevention control and countermeasures (SPCC), or risk contingency plans, which fulfill certain requirements of an SWP3, these plans may be referenced, at the permittee's discretion, in the appropriate sections of the SWP3 to meet those section requirements.
- (5) The permittee may combine the requirements of the SWP3 with another written plan if:
 - (A) The plan is retained at the facility and available for review;
 - (B) All the requirements of the SWP3 are contained within the plan; and
 - (C) A separate, labeled section is utilized in the plan for the SWP3 requirements.

G. VISIBLE OIL CORRECTIVE ACTION AND MONITORING PROGRAM

The permittee shall continue the Visible Oil Corrective Action and Monitoring Program set out in Inland Steel Company Consent Decree H90-0328, Visible Oil Monitoring Plan (June 29, 1993, and subsequent modifications thereto). All records for this program shall be maintained at the facility for inspection and review by IDEM and the U.S. EPA.

H. LONG-TERM INSTREAM BIOLOGICAL MONITORING

Upon completion of the Indiana Harbor and Indiana Harbor Ship Canal sediment remediation program described in the March 1993 consent decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging, the permittee shall initiate a long term Instream biomonitoring program in the Indiana Harbor Ship Canal and the Indiana Harbor. In the event of supplemental upstream dredging projects, the permittee may apply to EPA and IDEM for schedule modification as appropriate. The study for this program shall include the following:

Macroinvertebrates

Macroinvertebrates from four Instream locations to be selected by the permittee and approved by IDEM and the U.S. EPA will be collected, processed, and identified from natural and artificial substrates. Discounting vandalism, adverse river or weather conditions, and equipment failures, there shall be two sampling periods between July and September. Samples shall be collected every year beginning the first year after completion of the Indiana Harbor Ship Canal and the Indiana Harbor sediment remediation program described in the March 1993 Consent Decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging. Community indices such as taxa richness (including EPT), enumeration, community similarity, Hilsenhoff biotic index, and Brillouin's diversity index will be estimated for each sample location and sample period, along with the 10 ICI metrics described in Ohio EPA publication noted in footnote [1].

[1] Ohio Environmental Protection Agency. Biological criteria for the protection of aquatic life: Volume I (1988), The Role of Biological Data in Water Quality Assessment; Volume II (1988), Users Manual for Biological Field Assessment of Ohio Surface Water; Volume III (1989), Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities. Division of Water Quality Monitoring and Assessment, Columbus, Ohio.

I. REPORTING REQUIREMENTS FOR SOLVENTS, DEGREASING AGENTS, ROLLING OILS, WATER TREATMENT CHEMICALS, AND BIOCIDES

Annually, the permittee will report as part of the seventh monthly Discharge Monitoring Report of the following year, the total quantity (lbs/year) of each solvent, degreasing agent, rolling oil, water treatment chemical, and biocide that was purchased for that year and which can be present in any outfall regulated by this permit. This reporting requirement includes all surfactants, anionic, cationic, and non-ionic, which may be used in part or wholly as a constituent in these compounds.

ArcelorMittal Steel USA, Inc. will maintain these files for a period of ten years. Files will include the Material Safety Data Sheet, FIFRA label for each biocide, and chemical name and CAS number for each compound used. If these compounds contain proprietary or confidential business information, the permittee may maintain this information in a separate file that can be accessed by the U.S. EPA or IDEM personnel with appropriate authority.

J. SEDIMENT MONITORING

Upon completion of the Indiana Harbor Ship Canal and the Indiana Harbor sediment remediation program described in the March 1993 Consent Decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging, the permittee shall undertake a sediment monitoring program as specified below. Monitoring of bulk sediments is required for all pollutants regulated by this permit and the following chemicals and toxic metals:

Arsenic, Beryllium, Cadmium, Chromium, Hex. Chromium, Copper, Lead, Mercury, Nickel, Selenium, Zinc, Chlorides, Fluorides, Sulfates, Total Dissolved Solids, Total Suspended Solids, PCBs

In addition, monitoring shall include sediment particle size distribution, total organic carbon, total volatile sulfides, and percent water content.

In the event of supplemental upstream dredging projects, the permittee may apply to EPA and IDEM for schedule modification as appropriate.

Baseline conditions shall be established within three months after completion of the Indiana Harbor Ship Canal and the Indiana Harbor sediment remediation program described in the March 1993 Consent Decree H90-0328 between Inland Steel Corporation and the U.S. EPA, and completion of the U.S. Army Corps of Engineering dredging. This monitoring program will continue every other year with sampling in April and August for the duration of the permit. Sampling shall be conducted in the mixing zone approximately 100 feet from each outfall. Sediment sampling shall also be conducted at two (2) locations upstream of the permittee's outfalls, and at three (3) locations in the Indiana Harbor Ship Canal and the Indiana Harbor outside the immediate influence of the permittee's outfalls. Sediment analysis shall be restricted to the surface six (6) inches at each location. Sufficient samples shall be collected to provide adequate bulk sediments for analysis.

Sediment toxicity testing shall be conducted on sediment at each location specified above. Sediment toxicity testing shall be conducted with Hyallela azteca and Chironomus reparius in accordance with procedures specified in ASTM: E 1383-90. Sediment samples shall be collected, stored, characterized, and manipulated for toxicity testing as specified in ASTM: E 1391-90.

Reports related to bulk sediment analysis and toxicity testing shall be sent to IDEM and the U.S.EPA within 120 days of sample collection.

Within one (1) year of the scheduled completion date of the remediation program, the permittee shall submit to IDEM and U.S. EPA a scope of work (SOW) and

quality assurance plan (QAP related to this permit condition. Sediment sampling shall follow U.S. EPA approved procedures. The SOW and QAP shall be reviewed by IDEM and the U.S. EPA and comments submitted to the permittee within three (3) months of receipt.

K. GROUNDWATER REMEDIATION PROJECTS

“Compatible Treated Wastewater from Groundwater Remediation Project” for purposes of this permit means groundwaters that are contaminated with pollutants that are limited at the respective wastewater treatment facilities. Other groundwaters shall be pretreated prior to introduction to the respective wastewater treatment facilities to remove or treat those pollutants that are not limited or that cannot be effectively removed or treated at the respective wastewater treatment facilities.

The permittee shall notify IDEM prior to the date it desires to introduce compatible or pretreated groundwaters from any groundwater remediation project to wastewater treatment facilities at ArcelorMittal Steel USA, Inc.- Indiana Harbor East. Such notification shall include the volume of groundwater to be treated and discharged; a description of any groundwater pretreatment facilities; the identity of the receiving wastewater treatment facility and permitted outfall; identification, concentrations and mass loadings of containments in the untreated groundwater; identification, and expected concentrations and mass loadings of containments in the pretreated groundwater prior to introduction of groundwater to the wastewater treatment facilities; and, identification and expected concentrations and mass loadings of groundwater contaminants to be discharged from the wastewater treatment facilities. IDEM shall evaluate the information submitted to determine if a permit modification is required under 327 IAC 5-2-16. Discharge of this waste stream shall not commence until ArcelorMittal Steel USA, Inc. has received written approval from IDEM.

L. No. 7 BLAST FURNACE

The permittee is prohibited from discharging process wastewater from No. 7 Blast Furnace from any point source (except for the treated No. 7 Blast Furnace Recycle Blowdown from Internal Outfall 518 through Final Outfall 018). The permittee shall maintain and operate ground water recovery wells in the vicinity of the No. 7 Blast Furnace slag quench pits until such time as the permittee demonstrates to the satisfaction of IDEM and the U.S. EPA that there is no discharge of process wastewater from the slag quench pits.

M. POLLUTANT MINIMIZATION PROGRAM

This permit contains water quality-based effluent limits for Total Residual Chlorine at Outfalls 011, 014, 018, and 019. The permittee is required to develop and conduct a pollutant minimization program (PMP) for each pollutant with a WQBEL below the LOQ.

- a. The goal of the pollutant minimization program shall be to maintain the effluent at or below the WQBEL. The pollutant minimization program shall include, but is not limited to, the following:
 - (1) Submit a control strategy designed to proceed toward the goal within 180 days of the effective date of this permit.
 - (2) Implementation of appropriate cost-effective control measures, consistent with the control strategy within 365 days of the effective date of this permit.
 - (3) Monitor as necessary to record the progress toward the goal.
 - (4) Submit an annual status to the Commissioner at the address listed in Part I.C.3.g. to the attention of the Office of Water Quality, Compliance Data Section, by January 31 of each year that includes the following information:
 - (i) All minimization program monitoring results for the previous year.
 - (ii) A list of potential sources of the pollutant.
 - (iii) A summary of all actions taken to reduce or eliminate the identified sources of the pollutant.
 - (5) A Pollutant Minimization program may include the submittal of pollution prevention strategies that use changes in production process technology, materials, processes, operations, or procedures to reduce or eliminate the source of the pollutant.
- b. No Pollutant Minimization program is required if the permittee demonstrates that the discharge of a pollutant with a WQBEL below the LOQ is reasonably expected to be in compliance with the WQBEL at the point of discharge into the receiving water. This demonstration may include, but is not limited to, the following:

- (1) Treatment information, including information derived from modeling the destruction or removal of the pollutant in the treatment process.
 - (2) Mass balance information.
 - (3) Fish tissue studies or other biological studies.
- c. In determining appropriate cost-effective control measures to be implemented in a Pollutant Minimization program, the following factors may be considered:
- (1) Significance of sources.
 - (2) Economic and technical feasibility.
 - (3) Treatability.

N. SCHEDULE OF COMPLIANCE

Outfall 011: Mercury
Outfall 014: Mercury
Outfall 018: Mercury, Lead, Zinc

The permittee shall achieve compliance with the effluent limitations specified for Mercury, Lead and Zinc at Outfalls 011, 014, and 018 as soon as possible but no later than Fifty-four (54) months from the effective date of this permit in accordance with the following schedule:

1. The permittee shall submit a written Quality Assurance Project Plan (QAPP) to identify the sources of Mercury, Lead and Zinc to the Compliance Data Section of the Office of Water Quality (OWQ) no later than three (3) months from the effective date of this permit. IDEM will provide any comments within 30 days of receipt of the QAPP. If comments are made, IDEM will provide the permittee with the opportunity to discuss any comments prior to implementation of the QAPP. If IDEM does not comment within 30 days of its receipt of the QAPP, the permittee may proceed with implementation as set forth in the QAPP. The QAPP shall include a description of the method(s) selected for identifying the sources of Mercury, Lead and Zinc in addition to any other relevant information. The QAPP shall include a specific time line specifying when each of the steps will be taken. The new effluent limits for Mercury, Lead and Zinc are deferred for the term of this compliance schedule, unless the effluent limits can be met at an earlier date. The permittee shall notify the Compliance Data Section of OWQ as soon as the effluent limits for Mercury, Lead and Zinc can be met. Upon receipt of

such notification by OWQ, the final limits for Mercury, Lead and Zinc will become effective, but no later than Fifty-four (54) months from the effective date of this permit. Monitoring and reporting of Outfalls 011, 014 and 018 effluent for these parameters is required during the interim period. The QAPP shall address, at a minimum, the following:

- a. Identification of the sampling locations that will be utilized to evaluate potential sources of Mercury, Lead and Zinc to Outfalls 011, 014 and 018 (current and historic).
 - b. Development of a sampling plan to identify sources of Mercury, Lead and Zinc.
 - c. Assessment of the potential pollution prevention activities for Mercury, Lead and Zinc at the facility. The assessment should include a methodology for determining the feasibility of eliminating or reducing Mercury, Lead and Zinc from the internal wastestreams identified for inclusion in the sampling plan.
2. The permittee shall submit a report to the Compliance Data Section of OWQ no later than Fifteen (15) months from the effective date of this permit. This report shall include detailed information on:
- a. All sampling conducted during the previous 12 months for Mercury, Lead and Zinc including all analytical results obtained up to the time of the report.
 - b. A description of any pollution prevention activities implemented as a result of the sampling results (such as replacement of raw or intermediate products containing excessive quantities of Mercury, Lead and Zinc) that reduce or eliminate the addition of Mercury, Lead and Zinc into Outfalls 011, 014 and/or 018.
3. The permittee shall submit a QAPP report to the Compliance Data Section of OWQ no later than 27 months from the effective date of this permit. This report shall include detailed information on:
- a. The results of all sampling performed during the previous 24 months to evaluate potential sources of Mercury, Lead and Zinc to Outfalls 011, 014 and 018.
 - b. The evaluation of short-term and long-term control measures, including, but not limited to, best management practices, pollution prevention activities and treatment technologies that will reduce the concentration of Mercury, Lead and Zinc in the effluent from Outfalls 011, 014 and 018.
 - c. A description of any control measures that were identified and implemented during the previous 24 months.

- d. Any proposed or actual construction of additional treatment technology to reduce the concentration of Mercury, Lead and Zinc in the effluent from Outfalls 011, 014 and 018.
 - e. The anticipated date when the permittee will submit the Final Plan for Compliance (FPC) for the final effluent limits for Mercury, Lead and Zinc.
- 4. The permittee shall submit a proposed Final Plan for Compliance (FPC) containing the source identification report for Mercury, Lead and Zinc and the plan for implementing pollution prevent or installing treatment where feasible to achieve compliance with the final limits for Mercury, Lead and Zinc no later than thirty (30) months after the effective date of this permit. IDEM will provide any comments within 30 days of receipt of the FPC. If comments are made, IDEM will provide the permittee with the opportunity to discuss the comments prior to implementation. If IDEM does not comment within 30 days of its receipt of the FPC, the permittee may proceed with implementation as set forth in the FPC.
- 5. The permittee shall submit a report to the Compliance Data Section of OWQ no later than Thirty-Nine (39) months from the effective date of this permit. This report shall include detailed information on:
 - a. The implementation of pollution prevention activities such as replacement of raw or intermediate products containing excessive quantities of Mercury, Lead and Zinc; or production practices that reduce or eliminate the addition of Mercury, Lead and Zinc into the wastewater.
 - b. The construction of treatment technology identified in the FPC for the reduction of Mercury, Lead and Zinc in the effluent from Outfalls 011, 014 and 018.
 - c. The achievement of milestones identified in the FPC.
 - d. The anticipated date when the discharge from Outfalls 011, 014 and 018 can achieve compliance with the final effluent limits for Mercury, Lead and Zinc.
- 6. The permittee shall submit a progress report to the Compliance Data Section of OWQ no later than Forty-Eight (48) months from the effective date of this permit. This report shall include detailed information on:
 - a. The implementation of pollution prevention activities such as replacement of raw or intermediate products containing excessive quantities of Mercury, Lead and Zinc; or production practices that reduce or eliminate the addition of Mercury, Lead and Zinc into the wastewater.

- b. The construction of treatment technology identified in the FPC for the reduction of Mercury, Lead and Zinc in the effluent from Outfall 011, 014 and 018.
 - c. The achievement of milestones identified in the FPC.
 - d. The anticipated date when the discharge from Outfalls 011, 014 and 018 can achieve compliance with the final effluent limits for Mercury, Lead and Zinc.
7. Within thirty (30) days of completion of any additional pollutant control equipment, the permittee shall file with the Industrial NPDES Permits Section of OWQ a notice of installation for the additional pollutant control equipment and a design summary of any modifications.
 8. The permittee shall comply with the final effluent limitations for Mercury, Lead and Zinc at Outfalls 011, 014 and 018 no later than Fifty-four (54) months from the effective date of this permit.
 9. If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days following the missed deadline, submit a written notice of noncompliance to the OWQ stating the cause of noncompliance, and remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

O. FREE CYANIDE AND FLUORIDE

The permittee shall establish a monitoring program to establish a data base for the Free Cyanide and Fluoride at the outfalls listed below. The information gathered from the monitoring program will aid in the next NPDES permit renewal and shall be submitted to IDEM with the next renewal application. The monitoring program will consist of twelve (12) consecutive months of data. The monitoring program will begin no later than the thirty-sixth (36) month from the effective date of the permit and will last for twelve (12) consecutive months.

Outfall 011

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u>	<u>Requirements</u>
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
Cyanide, Free[1] Report		Report	lbs/day	Report	Report	mg/l	2 X Month	Grab

- [1] Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Free Cyanide	4500-CN-G	5 ug/l	16 ug/l
Free Cyanide	1677	0.5 ug/l	1.6 ug/l

Outfalls 011, 014, and 018

<u>Parameter</u>	<u>Quantity or Loading</u>			<u>Quality or Concentration</u>			<u>Monitoring</u>	<u>Requirements</u>
	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Measurement</u>	<u>Sample</u>
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
Fluoride	Report	Report	lbs/day	Report	Report	mg/l	2 X Month	24 Hr. Composite

P. ZEBRA AND QUAGGA MUSSEL CONTROL

As a means of controlling Zebra and Quagga Mussel colonization within the ArcelorMittal Steel Indiana Harbor East, the permittee chlorinates intake water on a continuous basis during a portion of each year. Wastewater shall be dechlorinated prior to discharge from all external Outfalls 011, 014, and 018. The discharge from each Outfall listed above shall have limitations and monitoring requirements for Total Residual Chlorine (TRC) to meet compliance with the TRC requirements.

Monitoring is required only during the period when intake water is being chlorinated for all Outfalls except 014. The wastewater discharge through Outfall 014 is chlorinated year round and shall be dechlorinated prior to discharge.

The monthly average water quality based effluent limit (WQBEL) for TRC is less than the limit of quantitation (LOQ) as defined below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

The daily maximum WQBEL for TRC is greater than or equal to the LOD but less than the LOQ specified in the permit. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Chlorine	4500-Cl-D,E or 4500-Cl-G	0.02 mg/l	0.06 mg/l

Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified above, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

Q. DREDGING PROJECT EFFLUENT

For the purposes of this permit, the term “Dredging Project Effluent” means wastewater generated during the dewatering of sediments or other material dredged from the Indiana Harbor or the Indiana Harbor Ship Canal. Beginning on the effective date and lasting until the expiration date of this permit, the permittee is authorized to treat and discharge dredging water effluent through its existing wastewater treatment facilities providing that the pollutant limits in the permit for the affected outfall are met and that treatment is adequate to reduce the concentration and loading of any additional pollutants so that they are below WQS levels and the loadings found in the most recent Wasteload Allocation prepared by IDEM. Dredging water effluents that are contaminated with pollutants that are not limited, or cannot be removed or treated at the respective wastewater treatment facility, must be pretreated for the removal of those pollutants prior to introduction into the wastewater treatment facility.

The permittee shall notify IDEM at least 120 days prior to the introduction of untreated or pretreated dredging project effluents to wastewater treatment facilities at ArcelorMittal Steel USA Inc.- Indiana Harbor East. Such notification shall include an estimate of the volume of dredging project effluent to be treated and discharged; a description of any pretreatment facilities; the identity of the receiving wastewater treatment facility and permitted outfall; identification and concentration of contaminants in the untreated dredging project effluent; identification and expected concentrations and mass loadings of contaminants in the pretreated dredging project effluent prior to introduction into the wastewater treatment facility; and, identification and expected concentrations and mass loadings of dredging project contaminants to be discharged from the wastewater treatment facility. The introduction of untreated or pretreated dredging project effluent to a wastewater treatment facility shall commence only upon written authorization from IDEM.

R. NO. 6 DOCK

Beginning on the effective date of this permit and lasting until a groundwater remediation program is implemented at the No. 6 Dock in accordance with the Corrective Action Requirements of consent decree No. H90-0328 between Inland

Steel and the United States, during the period March through November of each year the permittee shall continue conducting monthly inspections and repair programs at the No. 6 Dock for the purpose of sealing leaks of groundwater to the Indiana Harbor Ship Canal above the water line. The permittee shall report a summary of the leak detection and repair program not later than December 31st of each year of the program for that year. The report shall include the dates of inspection, the findings from each inspection, a description of the repairs undertaken, the approximate location of each repair with respect to a permanent reference location, and the dates the repairs were completed. The permittee shall also maintain a log of inspections and repairs at the facility, and shall make such log available to representatives of IDEM and the U.S. EPA upon request.

S. DISCHARGES TO THE LAKE MICHIGAN IMPOUNDMENT

The permittee shall not discharge process wastewater or fly ash lagoon leachate to the Lake Michigan Impoundment. Discharges to the Lake Michigan Impoundment shall be limited to storm water from the north portion of the facility, precipitation, groundwater from the facility, and inflows from Lake Michigan. The permittee shall use only service water (Lake Michigan intake water) for blast furnace slag quench near the Lake Michigan Impoundment.

For purposes of this permit, the water contained in the Lake Michigan Impoundment constructed by Inland Steel, now ArcelorMittal, shall be considered to be part of Lake Michigan.

T. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:
 - a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - b. controls any pollutant not limited in the permit.
2. to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.
3. to include whole effluent toxicity limitations or to include limitations for specific toxicants if the results of the long-term instream biomonitoring

program, and/or the whole effluent toxicity testing program, and or the TRE study indicate that such limitations are necessary to meet Indiana Water Quality Standards.

4. after reviewing the sediment monitoring data, required by Part I.J., IDEM and/or U.S. EPA reserves the right to reopen the permit and, after public notice and opportunity for hearing, require investigation and documentation of the source of contamination and establish discharge limits or monitoring requirements, if necessary.
5. this permit may be modified or revoked and reissued after public notice and opportunity for hearing to revise or remove the requirements of the pollutant minimization program, if supported by information generated as a result of the program.
6. this permit may be modified, or, alternately, revoked and reissued, to comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act, if the standards, regulations and requirements so issued or approved contains different conditions than those in the permit.

PART II

STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

- a. permission is requested in writing before such deadline;
- b. IDEM grants permission to submit the application after the deadline; and

- c. the application is received no later than the permit expiration date.

4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

- a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date.
- b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner.
- c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility.
- d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

5. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;

- b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or
- c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

- 1. Could significantly change the nature of, or increase the quantity of pollutants discharged; or
- 2. The commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other

provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4-1; subject to IC 13-14-6 and except as provided in IC 13-23-14-2 and IC 13-23-14-3, a person who violates any provision of environmental management laws; air pollution control laws; water pollution control laws; IC 13-18-14-1; or a rule or standard adopted by one (1) of the boards; or any determination, permit, or order made or issued by the commissioner under environmental management laws or IC 13-7 (before its repeal); air pollution control laws or IC 13-1-1 (before its repeal); or water pollution control laws or IC 13-1-3 (before its repeal); is liable for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation.

Pursuant to IC 13-30-5-1; except as provided in IC 13-23-14-2 and IC 13-23-14-3, a person who obstructs, delays, resists, prevents, or interferes with the department; and the department's personnel or designated agent; in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a Class C infraction. Each day of violation of this section constitutes a separate infraction.

Pursuant to IC13-30-10-1.5(k); except as provided in subsection (l), a person regulated under IC 13-18 who does any of the following commits a Class C misdemeanor: (1) willfully or recklessly violates any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16; (2) willfully or recklessly violates any National Pollutant Discharge Elimination System permit condition issued by the department under IC 13-18-19; (3) willfully or recklessly violates any National Pollutant Discharge Elimination System Permit filing requirement; or (4) knowingly makes any false material statement, representation, or certification in any National Pollutant Discharge Elimination System Permit form

or in any notice or report required by a National Pollutant Discharge Elimination System permit issued by the department.

Pursuant to IC13-30-10-1.5 (l); an offense under subsection (k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under subsection (k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or inoperative a recording device or a monitoring device required to be maintained by a permit issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10(b) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate

supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(10), “responsible charge” means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(a), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality - Mail Code 65-42, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee’s premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

- c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and
- d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a pollutant parameter that is not a BCC unless one of the following is completed prior to the commencement of the action:

- a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 5-2-11.3(b)(1). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a significant lowering of water quality and require the submittal of an antidegradation demonstration.
- b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 5-2-11.3(b)(3) through (6).

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(8).

Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to required the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(11):

- a. Terms as defined in 327 IAC 5-2-8(11)(A):
 - (1) “Bypass” means the intentional diversion of a waste stream from any portion of a treatment facility.
 - (2) “Severe property damage” means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.
- c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Part II.B.2.e; or
 - (4) The condition under Part II.B.2.b above is met.

- d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the “Spill Response and Reporting Requirements” in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery.
- e. The permittee must provide the Commissioner with the following notice:
 - (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.
 - (2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event.
- f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(12):

- a. “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment

facilities, lack of preventive maintenance, or careless or improper operation.

- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:
 - (1) An upset occurred and the permittee has identified the specific cause(s) of the upset, if possible;
 - (2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures;
 - (3) The permittee complied with any remedial measures required under Part II.A.2; and
 - (4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I of this permit.

C. **REPORTING REQUIREMENTS**

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

- a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.
- b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in “Monitoring Reports”, Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(10)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit;
- b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;
- d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants: Mercury, Lead, Zinc, Total Cyanide, Phenols

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass Fax Report" or a "Noncompliance Notification Report", whichever is appropriate, to IDEM at (317) 232-8637. If a complete fax submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

4. Other Noncompliance

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

- a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:
 - (1) For a corporation: by a responsible corporate officer defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs

similar policymaking or decision making functions for the corporation or the manager of one or more manufacturing, production or operating facilities employing more than two hundred fifty (250) persons or having the gross annual sales or expenditures exceeding twenty-five million dollars (\$25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above.
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- (3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information,

including the possibility of fine and imprisonment for knowing violations.”

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge of any pollutant identified as toxic, pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels.”
 - (1) One hundred micrograms per liter (100µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

- (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).
- (5) That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

PART III Other Requirements

A. Thermal Effluent Requirements

The thermal discharge shall be calculated for Outfalls 008, 011, 014, and 018. Such discharge shall be limited and monitored by the permittee as specified below.

- a. Flow and temperature values used in thermal discharge calculations shall be taken from the same day of monitoring.
- b. The thermal discharge shall be computed as follows:

$$\text{Thermal Discharge (MBtu/Hr.)} = Q \times (T_o - T_i) \times 0.3477$$

where,

MBtu/Hr = Million Btu/Hr.
Q = 24 hour discharge flow, MGD
To = effluent temperature, °F
Ti = influent temperature, °F
0.3477 = conversion factor

- c. Temperature shall be monitored as follows at Outfalls 008, 011, 014, and 018:

DISCHARGE LIMITATIONS

(Outfalls 008, 011, 014, and 018)

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u>	<u>Requirements</u>
	<u>Monthly</u>	<u>Daily</u>		<u>Monthly</u>	<u>Daily</u>		<u>Measurement</u>	<u>Sample</u>
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
Temperature								
Effluent [1]	----	----	----	Report	Report	°F	2 X Week	Grab
Intake [2]	----	----	----	Report	Report	°F	2 X Week	Grab

[1] Temperature at Outfalls 011, 014, and 018 shall be sampled between the hours of 12 pm and 4 pm. Temperature at Outfall 008 shall be sampled daily whenever discharge occurs.

[2] On days when temperature is sampled at an outfall, temperature shall also be sampled at the corresponding intake.

B. Biocides Concentration

The permittee must receive written permission from the IDEM if they desire to use any biocide or molluscicide other than chlorine in once through cooling water. The use of any biocide containing tributyl tin oxide in any closed or open cooling system is prohibited.

C. Polychlorinated Biphenyl

There shall be no discharge of polychlorinated biphenyl (PCBs) compounds such as those commonly used for transformer fluid.

PART IV

COOLING WATER INTAKE STRUCTURES-BEST TECHNOLOGY AVAILABLE (BTA) EVALUATION

1. INTRODUCTION

Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) requires that facilities minimize adverse environmental impact resulting from the operation of cooling water intake structures (CWIS) by using the "best technology available" (BTA). The only applicable federal regulation for implementing Section 316(b) at the ArcelorMittal Indiana Harbor East facility is 40 C.F.R. §125.90(b). This regulation requires that the BTA be determined using Best Professional Judgment (BPJ). The cooling water intake structures operated by ArcelorMittal Indiana Harbor East have been evaluated under BPJ and utilizing all available information to reach the following BTA determination. A discussion of the BPJ evaluation and a summary of the documentation submitted by ArcelorMittal can be found in the Fact Sheet.

At this time IDEM has determined that the existing cooling water intake structures represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

ArcelorMittal Indiana Harbor East shall at all times properly operate and maintain the cooling water intake structure and associated equipment to minimize adverse environmental impact.

2. MONITORING REQUIREMENTS

The purpose of the monitoring studies under this section shall be to further characterize the nature and extent of the environmental impacts, if any, from the CWISs in a scientifically valid manner. Impingement and entrainment have been determined to be appropriate measures for determining whether adverse environmental impacts have been minimized.

a. Entrainment

- (i) Within one year of the effective date of the permit, ArcelorMittal will submit to IDEM a proposal for

conducting a two-year entrainment study consistent with this Paragraph a.(i) during the second and third year of the permit term at the Indiana Harbor East facility Main Intake and Pump Houses No. 2 and No. 7. The proposal should be provided to IDEM at least 90 (ninety) days prior to the start of the proposed study.

The proposal should include appropriate sampling periods for the study based upon the expected spawning period for the species of interest. Sampling techniques should be appropriate for the water body and ensure that sufficient data are developed to allow for a scientifically valid estimate of potential entrainment impacts. Appropriate quality assurance/quality control procedures should be utilized.

- (ii) Beginning in year two of the permit's term, ArcelorMittal will conduct the two-year entrainment study (described above) at the Indiana Harbor East facility Main Intake and Pump Houses No. 2 and No. 7 in accordance with the proposal submitted to IDEM under (a)(i) above.
- (iii) Results of the entrainment study will be submitted to IDEM as soon after the completion of the study as possible but no later than one year after its completion.
- (iv) Following the initial two-year study described in (a)(i)-(iii) above, ArcelorMittal will submit to IDEM every five years thereafter during the permit's effectiveness a proposal for conducting a one-year supplemental entrainment study that takes into account information developed during the prior studies and any material changes at the CWISs. Supplemental studies may be limited to the extent no material changes have occurred at the CWISs. These proposals shall be submitted to IDEM at least 90 (ninety) days prior to the start of the proposed study.
- (v) ArcelorMittal will conduct the supplemental entrainment study described in (a)(iv) in accordance with its proposal.
- (vi) Results of the supplemental entrainment study will be submitted to IDEM as soon after the completion of the study as possible but no later than one year after its completion.

b. Impingement

- (i) Within one year of the effective date of the permit, ArcelorMittal will submit to IDEM a proposal for conducting a two-year impingement study consistent with this Paragraph b.(i) during the second and third year of the permit term at the Indiana Harbor East facility Main Intake and Pump Houses No. 2 and No. 7. The proposal should be provided to IDEM at least 90 (ninety) days prior to the start of the proposed study.

The proposal should include appropriate sampling periods for the study based upon the availability of the species of interest to be impinged. Sampling techniques should be appropriate for the water body and ensure that sufficient data are developed to allow for a scientifically valid estimate of potential impingement impacts. Appropriate quality assurance/quality control procedures should be utilized.

- (ii) Beginning in year two of the permit's term, ArcelorMittal will conduct the two-year impingement study (described above) at the Indiana Harbor East facility Main Intake and Pump Houses No. 2 and No. 7 in accordance with the proposal submitted to IDEM under (b)(i) above.
- (iii) Results of the impingement study will be submitted to IDEM as soon after the completion of the study as possible but not later than one year after its completion.
- (iv) Following the initial two-year study described in (b)(i)-(iii) above, ArcelorMittal will submit to IDEM every five years thereafter during the permit's effectiveness a proposal for conducting a one year supplemental impingement study that takes into account information developed during the prior years' studies and any material changes at the CWISs. Supplemental studies may be limited to the extent no material changes have occurred at the CWISs. These proposals shall be submitted to IDEM, at least 90 (ninety) days prior to the start of the proposed study.
- (v) ArcelorMittal will conduct the supplemental impingement study described in (b)(iv) above in accordance with its proposal.

- (vi) Results of each supplemental study will be submitted to IDEM as soon after the completion of each study as possible but no later than one year after its completion.

3. CHANGES DURING TERM OF PERMIT

ArcelorMittal shall provide advance notice to IDEM of any proposed changes to the CWISs or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

4. INTAKE SCREEN WASH

The discharge of Intake Screen Backwash shall meet the Narrative Water Quality Standards contained in Part I.B. of the permit.

5. FISH RETURN EVALUATION

Fish returns shall be evaluated for all intakes to determine if they would minimize fish mortality. The permittee shall submit to IDEM an evaluation of options to minimize fish mortality within one year from the effective date of the permit. This evaluation should include time frames to implement these measures. The permittee will implement any options that IDEM identifies as BTA after the information becomes available.